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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,698	09/26/2001	Makoto Misaka	1232-4767	6446

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EXAMINER

NGUYEN, THONG Q

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 10/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/966,698

Applicant(s)

MISAKA, MAKOTO

Examiner

Thong Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The present Office action is made in response to the amendment (Paper No. 8) filed by the applicant on 10/07/2002.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 5, 7 and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a) Claim 5 is rejected under 35 USC 112, first paragraph for the following reason.

The claim recites a condition governing the relationship between the focal length of the negative lens used as the compensating lens and the focal length of the fourth lens group. While the specification disclose data concerning the optical characteristics of the lens elements in the zoom lens system and the result of such relationship, see Table 1 in page 23. However, since the Office does not have the software for calculating the focal lengths of the lens element(s)/group(s) from the data provided in the specification; therefore, it is unclear whether the condition claimed has supported from the data provided in the specification or not. Applicant can provide an incorporate with the Office by inserting the value of

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the focal lengths of the each lens group and the compensating lens into the specification so that the condition claimed will clearly be supported.

b) Each of claims 7 and 11 is rejected for the similar reason as set forth in element a) above.

*In the Amendment (Paper no. 8, page 5) applicant has stated that one skilled in the art would understand the numerical ranges of the ratios without any software to calculate the focal lengths. Applicant's arguments have been fully considered but they are not persuasive. While the Examiner agrees with the applicant that one skilled in the art would understand the numerical ranges of the ratios; however, the rejection to the claims as clearly set forth in the previous Office action is directed to the specification with the data concerning the lens elements. In particular, it is unclear whether the data relating to the optical characteristics of the lens elements as provided in the specification are sufficient to support for the conditions claimed or not. Applicant should note that applicant can amend the specification by adding the value of the focal lengths of the lens groups involving in the conditions for each of the Table, and such an additional will sufficient to overcome the rejection.*

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a) Claim 9 is rejected under 35 USC 112, second paragraph because the feature thereof "and said fourth and fifth lens units decrease" (line 11) is indefinite. What does applicant mean by the mentioned feature?
- b) Claim 11 is rejected under 35 USC 112, second paragraph for the same reason as set forth in element a) above.
- c) The remaining claim is dependent upon the rejected base claim and thus inherits the deficiency thereof.

***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 1, 3-4, and 9, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki (U.S. Patent No. 6,025,962) in view of Yamazaki (U.S. Patent No. 5,000,549) (both of record).

Suzuki discloses a zoom lens system for use with an optical apparatus (see columns 1-2) wherein the zoom lens system comprises five lens units arranged in an order from an object side as follow: a first positive lens unit, a second negative lens unit, a third positive lens unit, a fourth negative lens unit and a fifth positive lens unit. In a zooming process from a wide angle to a telephoto position, the distance between the first and second lens units is increased; the distance between the second and third lens units is decreased; the distance between the third and fourth lens units is increased; and the distance between the fourth and fifth lens units is decreased. In an image stabilization process, the fourth lens unit

is moved in a direction perpendicular to the optical axis of the zoom lens system. See figures 1 and 4 and columns 14-16. While Suzuki discloses that the fourth lens unit is moved for compensating image vibrations, he does not disclose that only the negative lens component of the fourth lens unit is moved for compensating image vibrations.

However, the use of a lens unit having two lens subunits wherein the whole lens unit or one lens subunit is moved in a direction perpendicular to the optical axis of the zoom lens for compensating image vibrations is known to one skilled in the art as can be seen in the zoom lens system provided by Yamazaki. Even though the zoom lens system provided by Yamazaki is a two-lens units zoom lens; however, in the lens unit selected as the compensating lens unit, Yamazaki teaches that the whole lens unit or just a part of the lens unit can be used as a compensation lens element. The part of the lens unit to be moved can be a negative lens subunit (I-1) or a positive lens subunit (I-2). See column 3 and figs. 1-3. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the five-unit zoom lens of Suzuki by decentering/moving only the part of lens component having negative power as suggested by Yamazaki for the purpose of compensating image vibrations and simultaneously reducing the power consumption.

8. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Yamazaki as applied to claims 1 and 9 above, and further in view of Yamamoto (U.S. Patent No. 6,008,952, of record).

The combined product as provided by Suzuki and Yamazaki as described in the paragraph 7) above does not state that a photoelectric conversion element is disposed for receiving the image provided by the zoom lens. However, such use of a photoelectric conversion element for receiving an image provided by the zoom lens is considered as an inherent feature from the system provided by Suzuki. If it is not inherent then the use of an optical apparatus having a zoom lens of five lens units and a charged-coupled device located to receive the image provided by the zoom lens is clearly disclosed in the art of Yamamoto. See column 1, for example. Thus, it would have been obvious to one skilled in the art at time the invention was made to utilize a charged-coupled device positioned after a zoom lens as suggested by Yamamoto in the optical apparatus having a zoom lens with image compensating function provided by Suzuki and Yamazaki for the purpose of receiving the image formed by the zoom lens.

9. Claim 1, 3-4, 6, 8 and 9, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama (U.S. Patent No. 4,498,741) in view of Suzuki (U.S. Patent No. 6,025,962) and Yamazaki (U.S. Patent No. 5,000,549) (all of record).

Ishiyama discloses a zoom lens system having five lens units of a first positive power, a second negative power, a third positive power, a fourth negative power and a fifth positive power arranged in that order from an object side. During a zooming process, from a wide angle to a telephoto position, the distance between the first and second lens units is increased; the distance between the

second and third lens units is decreased; the distance between the third and fourth lens units is increased; and the distance between the fourth and fifth lens units is decreased. See columns 2-3 and the first embodiment. However, Ishiyama does not teach that the fourth lens unit is decentered with respect to the optical axis for the purpose of compensating image blurs caused by vibrations. The use of a compensating mechanism for decentering a lens unit for the purpose of compensating image blurs caused by vibrations is known in the art. For instance, Suzuki discloses a zoom lens system for use with an optical apparatus (see columns 1-2) wherein the zoom lens system comprises five lens units arranged in an order from an object side as follow: a first positive lens unit, a second negative lens unit, a third positive lens unit, a fourth negative lens unit and a fifth positive lens unit. In a zooming process from a wide angle to a telephoto position, the distance between the first and second lens units is increased; the distance between the second and third lens units is decreased; the distance between the third and fourth lens units is increased; and the distance between the fourth and fifth lens units is decreased. In an image stabilization process, the fourth lens unit is moved in a direction perpendicular to the optical axis of the zoom lens system. See figures 1 and 4 and columns 14-16. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the zoom lens system provided by Ishiyama by decentering the fourth lens unit as suggested by Suzuki for the purpose of compensating image blurs caused by vibrations.



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The combined product as provided by Ishiyama and Suzuki does not disclose that only a part of the lens unit is decentered in the image compensating process; however, the movement of the whole lens unit or just a part of the lens unit in an image compensating process is known to one skilled in the art as can be seen in the system provided by Yamazaki.

Even though the zoom lens system provided by Yamazaki is a two-lens units zoom lens; however, in the lens unit selected as the compensating lens unit, Yamazaki teaches that the whole lens unit or just a part of the lens unit can be used as a compensation lens element. The part of the lens unit to be moved can be a negative lens subunit (I-1) or a positive lens subunit (I-2). See column 3 and figs. 1-3. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the five-unit zoom lens provided by Ishiyama and Suzuki by decentering/moving only the part of lens component having negative power as suggested by Yamazaki for the purpose of compensating image vibrations and simultaneously reducing the power consumption.

10. Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishiyama in view of Suzuki and Yamazaki as applied to claims 1 and 9 above, and further in view of Yamamoto.

The combined product as provided by Ishiyama, Suzuki and Yamazaki does not clearly state that the system comprises an electronic conversion element disposed for receiving the image provided by the zoom lens. However, such use of a photoelectric conversion element for receiving an image provided by the

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zoom lens is considered as an inherent feature form the system provided by Suzuki. If it is not inherent then the use of an optical apparatus having a zoom lens of five lens units and a charged-coupled device located to receive the image provided by the zoom lens is clearly disclosed in the art of Yamamoto. See column 1, for example. Thus, it would have been obvious to one skilled in the art at time the invention was made to utilize a charged-coupled device positioned after a zoom lens as suggested by Yamamoto in the optical apparatus having a zoom lens with image compensating function of Ishiyama and Suzuki for the purpose of receiving the image formed by the zoom lens.

### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1-10, now applied to claims 1-11, have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

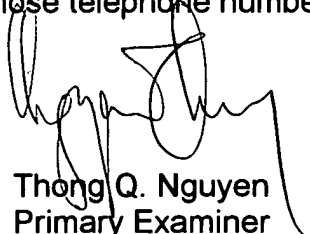
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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (703) 308-4814. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703) 308-1687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Thong Q. Nguyen  
Primary Examiner  
Art Unit 2872

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October 22, 2002